REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of June 3, 2004 is respectfully requested.

Claims 14-22 are presently pending in this application. As indicated above, however, several minor amendments have been made to the pending claims, although it is submitted that these amendments do not affect the reasons for patentability of the claims, as will be discussed below. Consequently, it is submitted that these amendments do not raise new issues requiring further search and consideration, and the Examiner is requested to enter these amendments at this time.

The Examiner has rejected claims 14 and 15 as being unpatentable over the Inagaki'146 reference (USP 4,280,146); and has rejected claims 14, 15, 18-20, and 22 as being unpatentable over the Inagaki '821 reference (USP 5,399,821) in view of the Shimizu reference (USP 6,621,027). However, these rejections are respectfully traversed. For the reasons discussed below, it is respectfully submitted that claims 14-22 are clearly patentable over the prior art of record.

Independent claim 14 is directed to a *method* of manufacturing a key top plate comprising clamping a *first film plate and a second film plate* between a first die and a second die, in which the first die and the second die are shaped and arranged to form a key top cavity therebetween. Molten mold-thermoplastic resin is injected into the key top cavity between the first film plate and the second film plate so as to fill the key top cavity to thereby form a molten mold-thermoplastic resin keytop body with the first film plate attached to a top surface of the keytop body and with the second film plate attached to a bottom surface of the keytop body. The first die and the second die are then removed after the molten mold-thermoplastic resin has set so as to obtain a key top that includes the keytop body, the first film plate *attached to the top surface* of the key top body, and the second film plate *attached to the bottom surface* of the key top body.

As explained in the remarks submitted with the Amendment filed March 17, 2004, because this method allows film plates to be attached to both the top surface and the bottom surface of a key top body, there is much less risk that one of the film plates will be inadvertently peeled from the key top body. Moreover, the method of claim 14 recites a highly efficient process for attaching the first film plate to the top surface of the key top body and for attaching the second film plate to the bottom

surface of the key top body, without the need for an additional step of applying an adhesive layer between either film plate and the key top body.

The Inagaki '146 reference is directed to a push-button switch and a key top. The Examiner asserts that this reference discloses clamping a resin film between an upper mold having a cavity and a lower mold having a cavity, in which the upper and lower molds are parted resulting in a key top, and refers to column 6, lines 1-16. This portion of the Inagaki '146 reference describes a conventional method of forming a key top as shown in Figure 9, in which *one* film plate 10 is arranged between dies 105 and 106, and resin is injected into the cavity 110. However, this embodiment does not describe clamping a first film plate *and* a second film plate between a first die and a second die, and then injecting molten mold-thermoplastic resin *between* the first film plate and the second film plate so as to form a molten mold-thermoplastic resin key top body.

Nonetheless, the Examiner asserts that the Inagaki '146 reference also discloses upper and lower resin sheets, and refers to the embodiment described in column 10, lines 8-18. This portion of the Inagaki '146 reference, however, describes a water-tight, push-button switch as illustrated in Figure 18. In particular, a lower resin sheet 17-5 is arranged to oppose an upper resin sheet 16-5, and the resin sheets are spaced apart by spacers 18-5. As explained in column 10, lines 35-37, a key top 12-5 is arranged so as to press against the upper resin sheet 16-5 so that a moveable contact 16-5a on the upper resin sheet 16-5 can be pressed into contact with a fixed contact 17-5a on the lower resin sheet 17-5. Although a key top 12-5 forms a portion of the push-button switch shown in Figure 18, the resin sheets 17-5, 16-5 are not part of the key top.

Moreover, the various embodiments of Figures 9 and 18 referred to by the Examiner are directed to *completely different inventions*, and the Examiner appears to improperly be selectively choosing various structural elements of these different embodiments to form the rejection, even though there is no suggestion whatsoever to combine these elements as suggested by the Examiner. In particular, in the discussion of the push-button switch of Figure 18, the Inagaki '146 reference does not even suggest injecting a molten mold-thermoplastic resin between the lower resin sheet 17-5 and the upper resin sheet 16-5. In fact, a space must be maintained between the resin sheets in order for the switch to operate as explained in column 10, lines 35-37, so that the Inagaki '146

reference appears to, in fact, teach away from this step. Moreover, the push-button switch described in column 10 and illustrated in Figure 18 also does not disclose or suggest clamping the resin sheets 17-5 and 16-5 between a first die and a second die.

Furthermore, as alluded to above, the Examiner appears to have forgetten that the present application involves *method* claims. As such, the prior art references must teach or suggest each of the *process steps* recited in claim 14, and it is not enough to merely selectively identify various structural components. For example, as noted above, the Inagaki '146 reference does not disclose or suggest *injecting* molten mold-thermoplastic resin *between* a first film plate and a second film plate, even if the embodiments of Figures 9 and 18 can be combined. In addition, the Examiner asserts that it would be obvious to one of ordinary skill in the art to emit the spacer 18-5 between the resin layers 17-5 and 16-5 shown in Figure 18 because the omission of an element and its function *in a combination* where the remaining elements perform the same functions as before involves only routine skill in the art. In this regard, the Examiner has cited *In re Karlson*, 136 USPQ 184 to support his position. However, the *Karlson* case concerns the patentability of *apparatus* claims directed to a chemical feeder, rather than method claims. Thus, it is submitted that the *Karlson* case is not on point, and the true question in this case is whether the references teach all of the *process steps* recited in the claims.

As explained above, the Inagaki '146 reference does not disclose or even suggest a method of manufacturing a key top plate, comprising clamping a first film plate and a second film plate between a first die and a second die, and injecting molten mold-thermoplastic resin into the key top cavity between the first film plate and the second film plate. Therefore, one of ordinary skill in the art would not be motivated by the Inagaki '146 reference to obtain the invention recited in independent claim 14.

The Inagaki '821 reference discloses a method of manufacturing a key top for a push-button switch, in which *one* resin film plate 30 is arranged between a first die 81 and a second die 91. Resin is then injected into the cavity to form a key top body 20 having the resin film 30 formed on *only* the top surface of the key top body 20 (see column 5, lines 22-53, and Figure 3). As acknowledged by the Examiner, the Inagaki '821 does not disclose or suggest a second film plate. In fact, the Inagaki

'821 reference does not disclose or suggest the process of clamping a first film plate and a second film plate between a first die and a second die, and injecting molten mold-thermoplastic resin between the first film plate and the second film plate so as to fill a key top cavity formed between the first die and the second die.

Nonetheless, the Examiner asserts that the Shimizu reference teaches a key top member including a first resin sheet 2, filler members 5, and a second resin sheet 22 attached to the bottom of the filler members 5 by an adhesive 21 (see column 5, lines 17-25, and Figure 2A). However, the Shimizu reference also does not disclose or suggest the *process* of clamping a first film plate and a second film plate between a first die and a second die, and then injecting molten mold-thermoplastic between the first film plate and the second film plate so as to fill a key top cavity formed between the first die and the second die to thereby form a mold-thermoplastic resin key top body. In contrast, as noted above, the second resin sheet 22 is attached to the filler members 5 by adhesive. Thus, as discussed above with respect to the Inagaki '146 reference, the Examiner appears to be selectively identifying structural components from various prior art references to form the rejections, without regard to the *process steps* required in the claims.

As explained above, the Inagaki '821 reference, the Shimizu reference, and the Inagaki '146 reference do not, either alone or in combination, disclose or suggest clamping a first film plate and a second film plate between a first die and a second die, and then injecting molten mold-thermoplastic resin between the first film plate and the second film plate so as to fill a key top cavity formed between the first die and the second die so as to form a mold-thermoplastic resin key top body in which the first film plate is attached to a top surface of the key top body and in which the second film plate is attached to a bottom surface of the key top body. Therefore, one of ordinary skill in the art would not be motivated to modify or combine the references so as to obtain the invention recited in independent claim 14. Accordingly, it is respectfully submitted that claim 14 and the claims that depend therefrom are clearly patentable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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